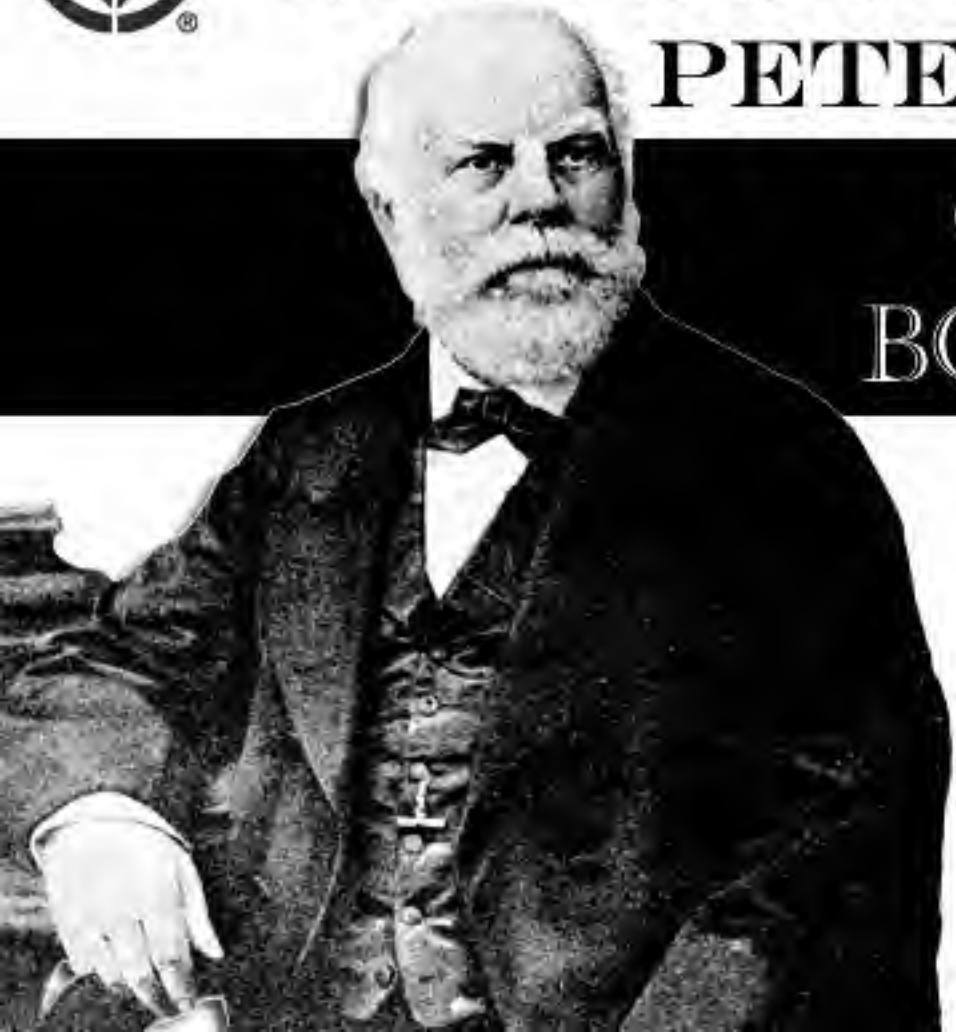




# MISSOURI BOTANICAL GARDEN

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## GEORGE ENGELMANN BOTANICAL NOTEBOOKS

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Herb. reg. Monat.

Mexico

Kawasaki

- Herb reg. Monat.

Nov. 1

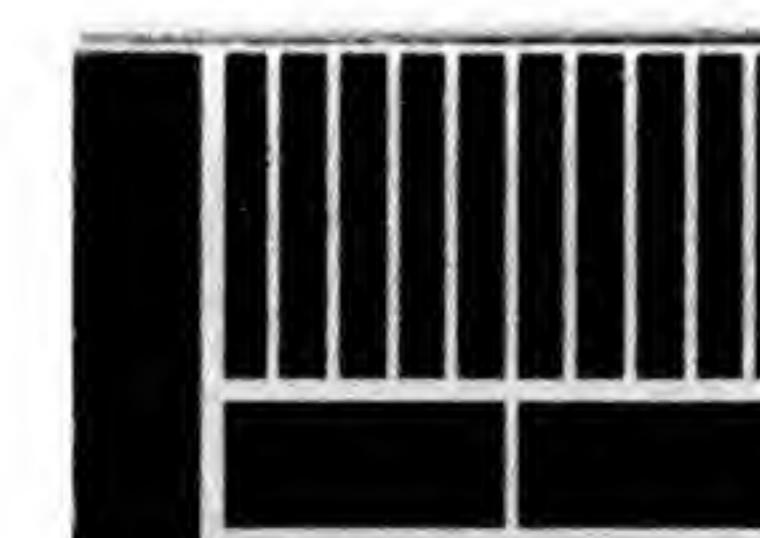
Nov. 1857

2210

unripe fruit

Can this be *Akebono*?

Style



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*Phyllostachys*

Branches large, broad 2 inches, with rounded  
crenations, with lateral nerves, except where  
a branch or a flower is developed.

Flower large, rose red  
tube short, numerous lax sepals  
sepals orange brown bristles in the axillary  
unripe fruit oval, apparently ribbed.  
unripe (but full-sized  $\frac{1}{2}$ ) seed

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Kew Sept 1869

*Phyllostanthus Arkansanus* (Haw. ex Cather)

~~purple~~ <sup>scarlet</sup> flower

12 or 13 c. diameter; tube short

7 rose color & stigmate

length of flower not more than 10 or 12

Bot Regist. 1331 <sup>Cent.</sup> vide below

Ph. 1

Hort Elkan. t. 64

very fair, but makes the orange scarlet.  
fruit  $5\frac{1}{2} \times 3$  wide ovate, angular  
(apparently 8 angled)

Flower represents  
*Ph. phyllanthus*

2211

2092

3598

2692

*Ph. anguliger* <sup>semi</sup> Bot Mag. 5100 has a long tubular  
white flower 18 c. by 12 a wide -

orange with purple 12 or 14 triangular spurs  
acute - tube with as many;  
petals long connivent, 11 stigmata  
for western Mexico.

*P. Arkansanus* Bot Mag. 3598. fl. 17 wide  
~~purple~~ <sup>scarlet</sup> flower - same as *St. oxyptera*?  
not hybrid - seed from Mexico - petals  
acute - bracts 2-2 $\frac{1}{2}$ " wide  
tube 2" long orange & tube with few  
membraneous scales - petals 4" long  
Anther & pollen rose color, 7 stigmata  
rose color.



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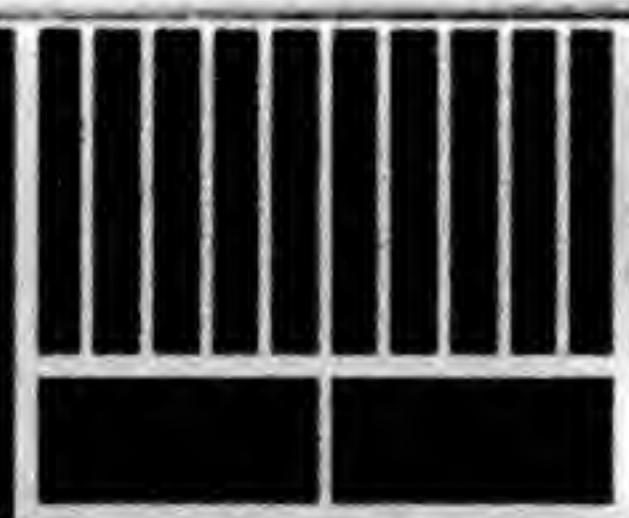
*Dyliocerasia Ackermannii* (Thunb.)  
cult Hod Brevoli.

#6 reg. Berlin  
1869

stigmate 4 (5<sup>2</sup>) petala novia

Corona staminum ad fuorem

2212



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Herr Schäfer Münster  
June 1857

*Phyllocacter phyllanthoides*.

2213

tubo floris gracili,  $\frac{1}{2}$  pollini, f. quamvis sepalodis  
(*s. potius*) repalci inferioribus tubi - squamiformibus  
sub 21 ( $\frac{8}{9}$  deposit) ovatis s. oblongis,  
anthers ovoidis ad apicem laniatus  
sepalis superantes petalodis  
late oblongis  
petalis oblongo-ovatis, roseis  
superiora piperinae tibi part  
nudo, medio staminiferum et  
fauco dilatato corona staminis  
neam si cyprea gerente  
style super staminis longe  
exerto, ligulis 6



a-c awl

a-b orifice cavity

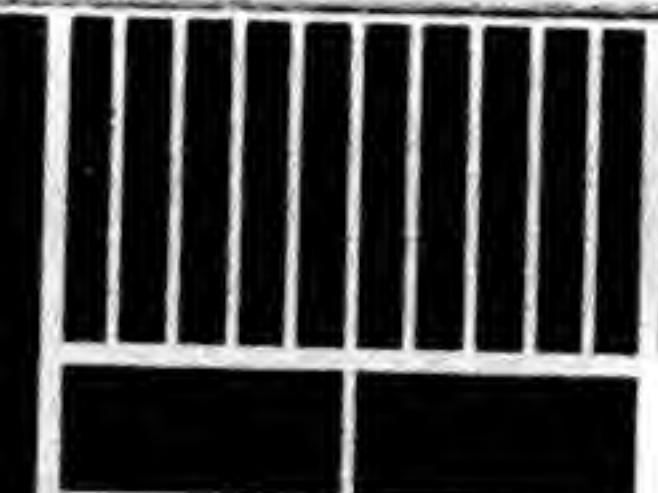
b-c solid part.

c-d naked part of tube, contrasted D  
with thicker walls

d-e staminiferous part, dilated

e-f still more funnel-shaped dilated  
naked part

f upper corona of stamens



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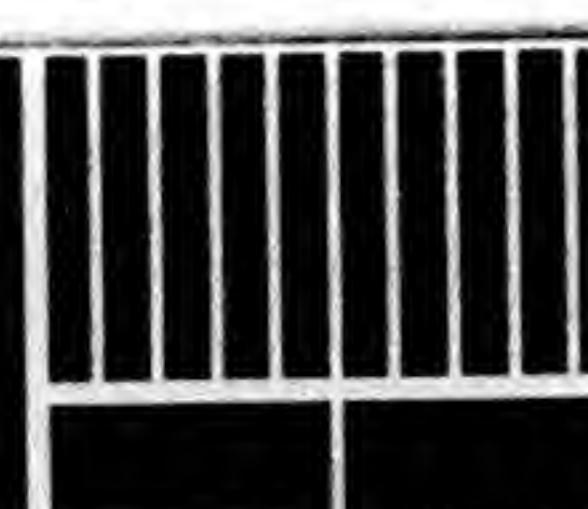
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*Phyllocactus phyllanthoides*

(2)

Andriex, Mexico 1836 no number

- At Mrs. Paris

Apr 1869

tube rather short, with numerous rounded or spreading sepals which in their axil bear wool and a few spinules -

second triangular spreading sepal,  
on ovary with similar wool & spinules

ovary



2214



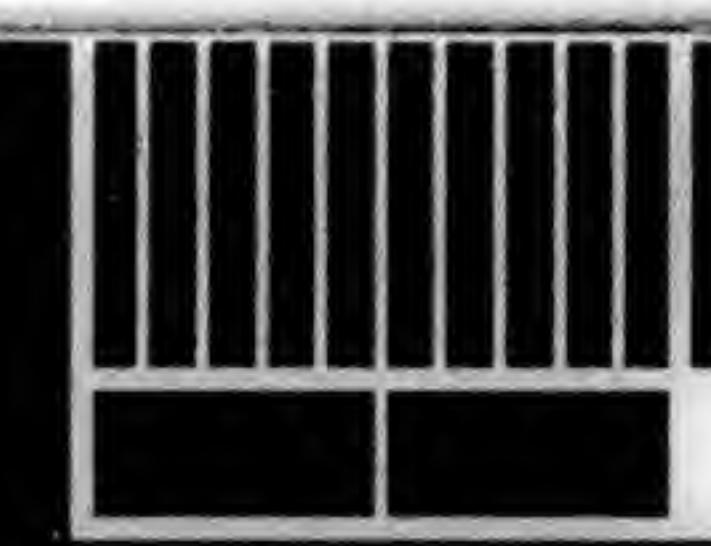
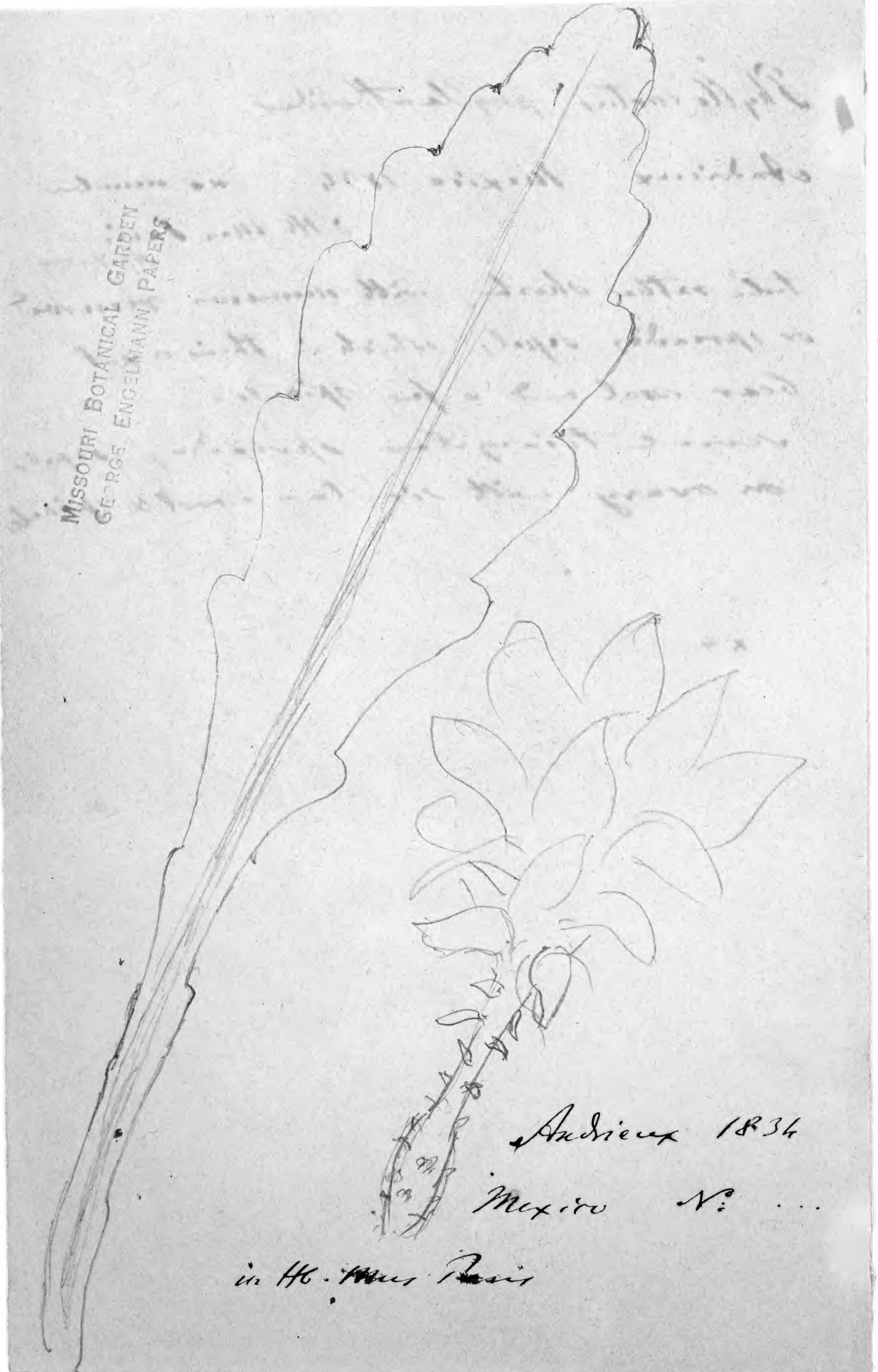
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"*Phyllocoelias catifrons*" H D Moore Aug 12 1869  
wrongly named, perhaps an hybrid of *C. speciosissima*  
fruit oval, 16-20 areolae in 8 distinct series?  
(tuberolated) so that the fruit would appear  
& angled if the tubercles were more united.  
areolar spinous.

2215



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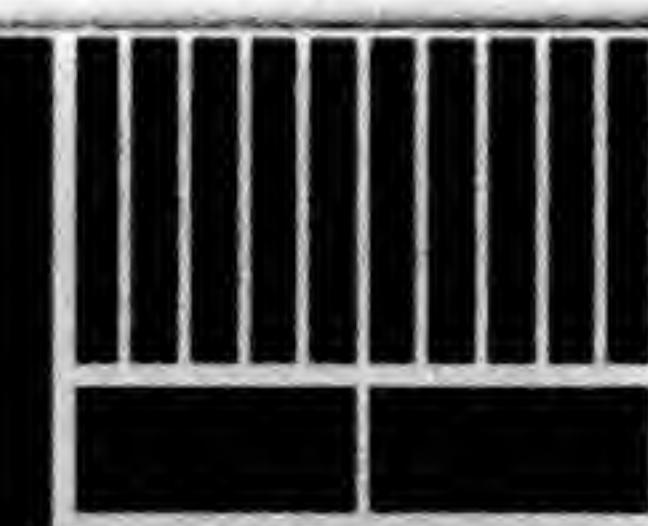
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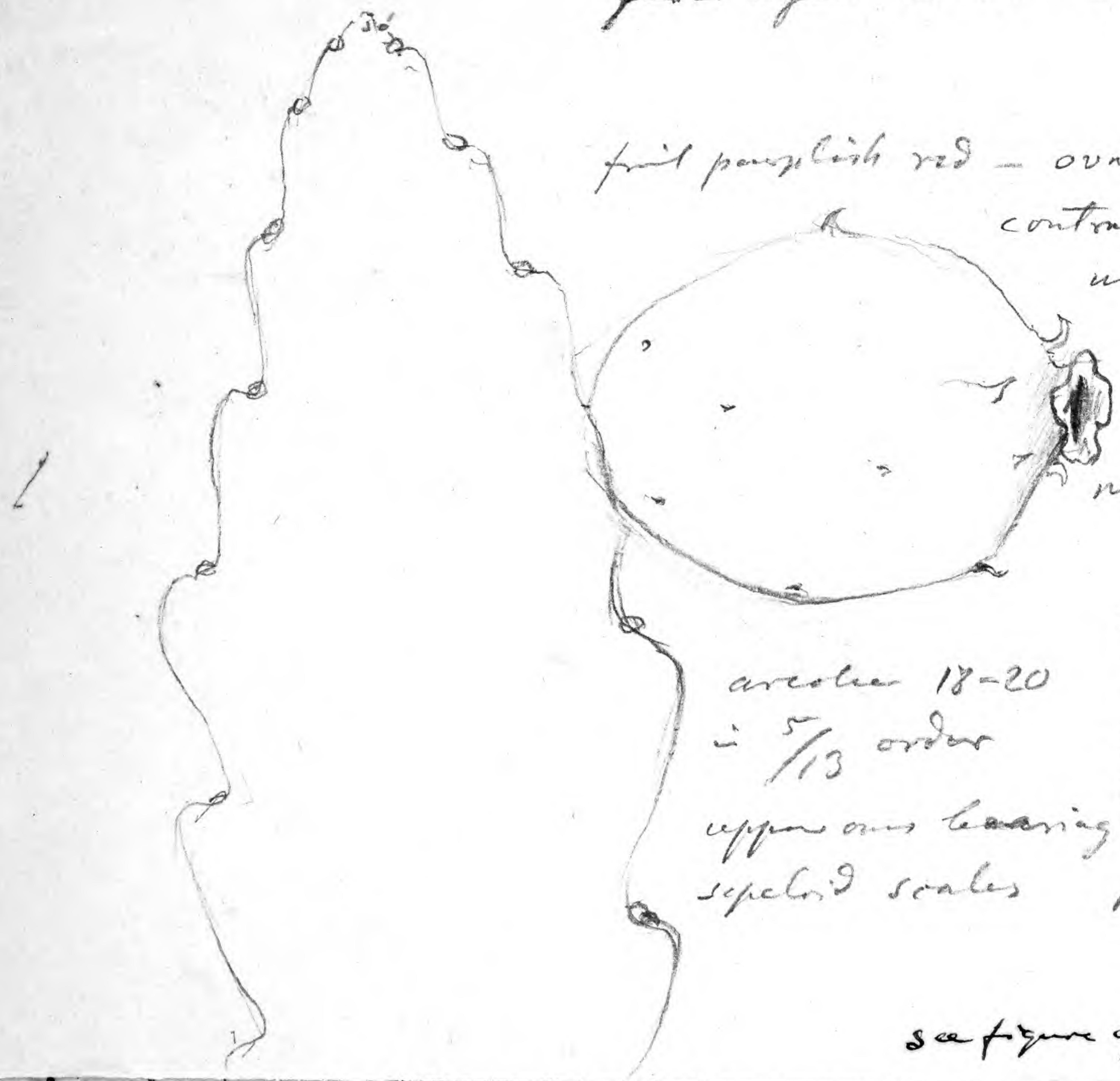
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"Cornus alba var." (Haller) M. B. Berlin June 7, 1868  
Hort. Cigard with C. speciosiss. names  
coll. by Gustav Berger



areolae 18-20  
in 5 to 6 rows  
upper ones larger  
septal scales

This electron micrograph shows a cross-section of a cell nucleus. The interior is filled with a granular material representing chromatin. Several large, dark, irregularly shaped structures, identified as nucleoli, are visible. A nuclear envelope, consisting of two distinct membranes, surrounds the nucleus. A portion of the envelope has been removed to reveal the nucleoplasm inside.

2216

see figure of first of Can specimens  
which I began



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May 1918

Cactus & Cactaceae  
selected from  
Cactaceae  
Cactus

Im vorigen Jahr ist ab mir und von  
fulligem Verfusen gelungen, dass Es.  
früchten das Blatt von *Cact. alatus*  
mit dem Pollen von *Cactus speciosus* eine  
frucht zu bekommen, die aufgrund war,  
und ich ihm diese gegen die fruchte  
von *Cactus alatus* ist. 2217

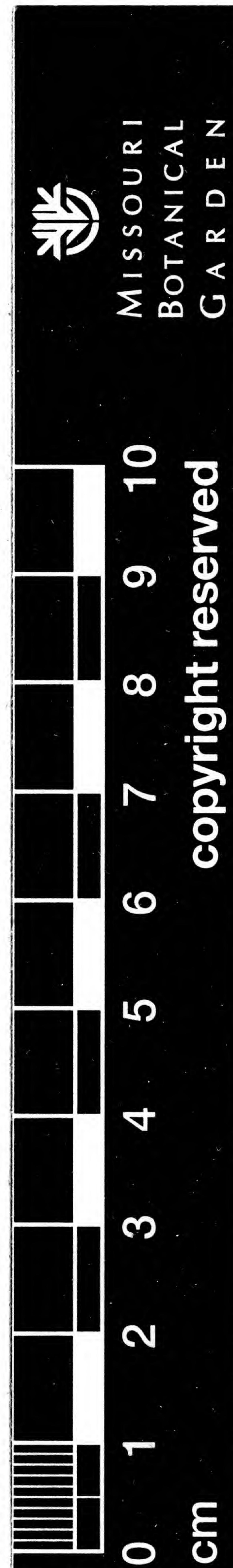
Bei der Bepräfung münden jedobalal  
sofort auf den Pfeffer der Blätter der  
Blatt von *cactus* und nun der Pollen  
von *Cactus (alatus) speciosus* gegen, obwohl  
die Pflanze sehr an einer minder  
Pole stand, kann nicht eine Bepräfung  
der anderen Blätter von *Cactus* komme.  
Zugleich erhielt ich eine fruchte von *Cactus*  
*alatus* & *speciosus*.

Die frucht von *Cact. speciosus* ist kugelig,  
 $1\frac{3}{4}$ " dick,  $2\frac{1}{8}$ " lang & grün

Die von *Cactus alatus*, Etwas hoch  $\frac{1}{2}$ " dick  
 $1\frac{3}{4}$ " lang & grünroth

Die durch Bepräfung einer Blätter von *Cact.*  
*alatus* mit dem Pollen von *Cact. speciosus*

gelungen habe eine frucht die kugelig,  $1\frac{1}{2}$ " dick  
 $1\frac{7}{8}$ " lang & grünroth ist, jedoch ist die farbe  
nicht so intensiv und offene, wie bei den  
fruchten von *Cact. alatus*.



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Gustav Berger.

MISSOURI BOTANICAL GARDEN  
ST. LOUIS, MO. U.S.A.

*Cuscuta grusii.*



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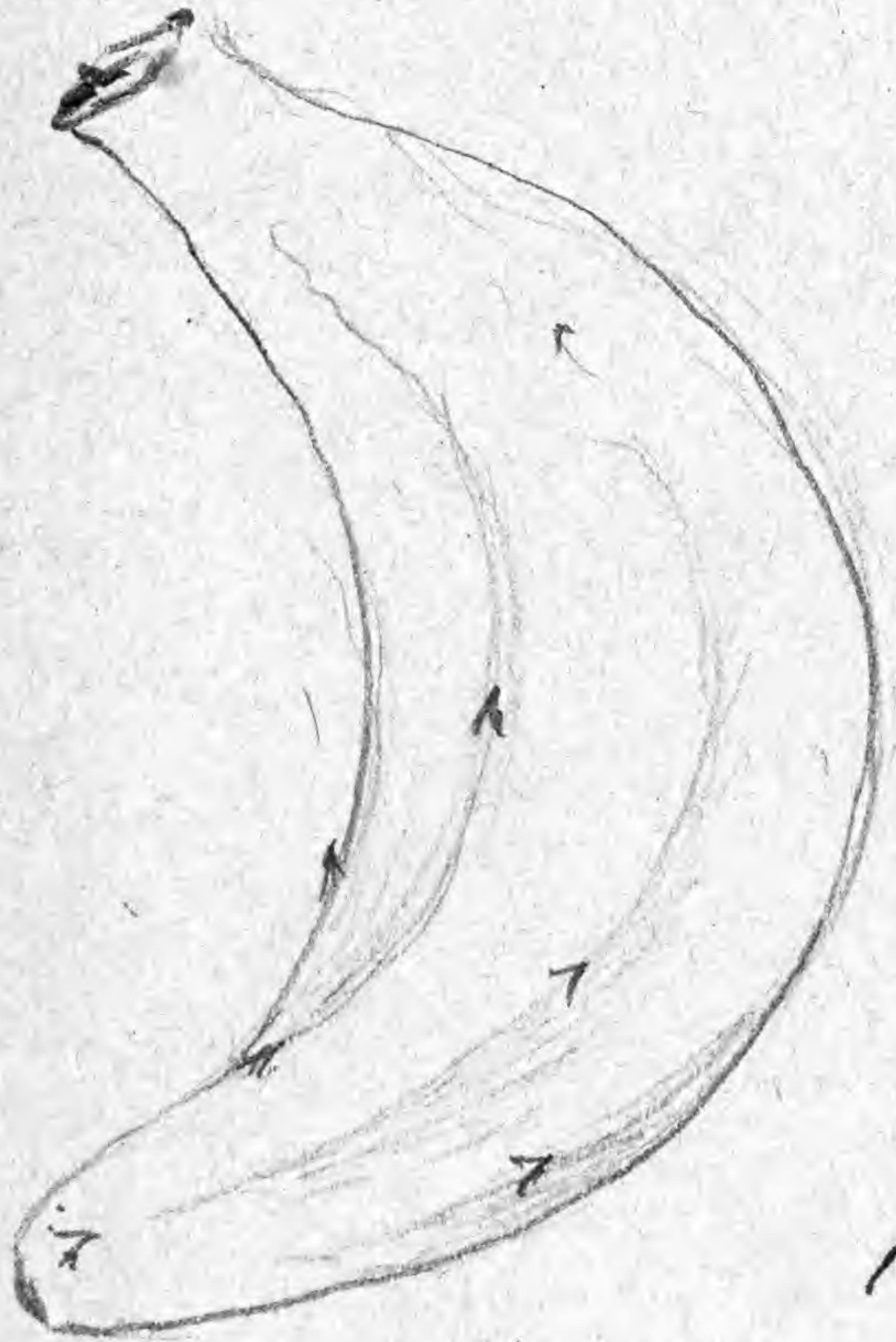
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*Phyllocactus*

Napoli

Villa Floridana

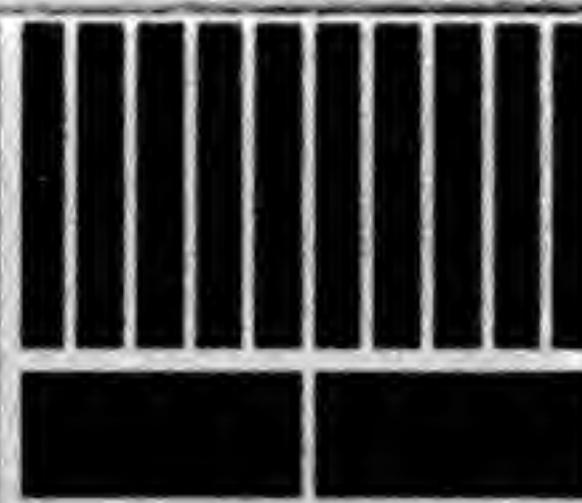
Dec 30. 1868



2218

Irregularly formed fruit  
red with yellowish base, soft, pulpy  
slightly 5-angled, with about 15 scales,  
small, triangular

pulp paler, rose red, seeds few (only 7)  
apparently few fertilized, and fruit therefore  
imperfectly formed



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